

Serial No.: 10/583,971  
Docket No.: SH-0064PCTUS  
(RYU.025)

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**AMENDMENTS TO THE CLAIMS**

**Please amend the claims as follows:**

1. (Currently Amended) A method of manufacturing porous glass base material for optical fiber, comprising:
  - flame-hydrolyzing raw materials in an oxyhydrogen flame to generate glass fine particles;
  - using a burner to deposit the glass fine particles on a rotating target to form said porous glass base material, said burner being moved relatively to said rotating target;
  - adjusting an amount of hydrogen and oxygen supplied to said burner;
  - ~~during said using said burner such that~~ cooling a surface of the porous glass base material during said using the burner to deposit the glass fine particles while adjusting a temperature difference ( $T_a - T_b$ ) between a surface temperature of said porous glass base material when touching a flame of said burner ( $T_a$ ) and a surface temperature of said porous glass base material prior to touching said flame of said burner ( $T_b$ ) is to be within a range from 200 °C to 700 °C;
  - and
  - dehydrating and sintering said porous glass base material to transform said porous glass base material into clear glass.
2. (Previously Presented) A glass base material for optical fiber made of the porous glass base material obtained according to claim 1, wherein said porous glass base material is dehydrated, sintered, and transformed into clear glass.
3. (Previously Presented) The method of manufacturing porous glass base material for optical fiber according to claim 1, wherein said rotating target is displaced relative to said burner being moved.

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4. (Previously Presented) The method of manufacturing porous glass base material for optical fiber according to claim 1, wherein said burner comprises a concentric multi tube burner.

5. (Currently Amended) The method of manufacturing porous glass base material for optical fiber according to claim 4, wherein said concentric multi tube burner comprises:

a first tube ~~comprising~~ supplied with  $\text{SiCl}_4$  and  $\text{O}_2$ ;

a second tube ~~comprising~~ supplied with air;

a third tube ~~comprising~~ supplied with  $\text{H}_2$ ;

a fourth tube ~~comprising~~ supplied with  $\text{N}_2$ ; and

a fifth tube ~~comprising~~ supplied with  $\text{O}_2$ .

6. (Previously Presented) The method of manufacturing porous glass base material for optical fiber according to claim 1, wherein said glass fine particles are deposited at a rate in a range of 2040 g/hr to 2360 g/hr.

7. (Previously Presented) The method of manufacturing porous glass base material for optical fiber according to claim 1, wherein the temperature difference ( $T_a - T_b$ ) is within a range from 200 °C to 400 °C.

8. (Withdrawn) The method of manufacturing porous glass base material for optical fiber according to claim 1, wherein the temperature difference ( $T_a - T_b$ ) is within a range from 500 °C to 700 °C.

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9. (Previously Presented) The method of manufacturing porous glass base material for optical fiber according to claim 1, wherein a deposition efficiency was in a range of 0.51 to 0.59.
10. (Withdrawn) The method of manufacturing porous glass base material for optical fiber according to claim 1, wherein said glass fine particles are deposited at a rate in a range of 2040 g/hr to 2160 g/hr.
11. (Previously Presented) The method of manufacturing porous glass base material for optical fiber according to claim 1, wherein said glass fine particles are deposited at a rate in a range of 2200 g/hr to 2360 g/hr.
12. (Withdrawn) The method of manufacturing porous glass base material for optical fiber according to claim 1, wherein a deposition efficiency was in a range of 0.51 to 0.54.
13. (Previously Presented) The method of manufacturing porous glass base material for optical fiber according to claim 1, wherein a deposition efficiency was in a range of 0.55 to 0.59.